

Sibbaldia procumbens

Arizona cinquefoil

Status

Federal status: G5 N?, Not listed

NH state status: S1, Endangered

ME state status: Not ranked or listed

Flora Conservanda Division 2, regionally rare taxa with fewer than 20 occurrences in New England. Population trends unknown. Only population in the eastern U.S. has persisted since at least the 1800s. Number of plants may have decreased since 1970s, but that change could also have been a single season anomaly.

The expert panel estimated the range-wide and WMNF viability at outcome B to C now and in the next 20 years. Trail impact on this species and its community in the Presidentials is not that high. Local demes have been lost, but the overall geographic extent of the taxon has not been reduced. It is expected that recreation impacts will increase in the next 20 years, but so will public awareness, which may mitigate some impacts. If off-trail hiking prohibitions are not enforced, and specific sites are not protected, the outcome will move toward C in next 20 years.

Distribution

Circumboreal, south to alpine areas of eastern Quebec and northern New Hampshire, and to Colorado and California. The New Hampshire occurrence is considered disjunct from the rest of the species' range.

New Hampshire has the only U.S. occurrence east of the Mississippi. It is in Sargent's Purchase on the WMNF.

Habitat

In New Hampshire, *Sibbaldia procumbens* is an alpine obligate. The only known occurrence is at the bottom of a snowfield. This may not be typical, because further north this species occurs in other habitats within the snowbank/streamside/wet ravine alpine system.

Heavy late melting snow, high moisture levels, and a relatively thick organic soil layer characterize the snowbank/streamside/wet ravine alpine patch communities. Snow loading is important because it provides protection from harsh winters and fluctuations in spring temperatures. Snow and thick soils and/or streamside conditions provide the moisture levels that are critical for these species.

Limiting Factors

Hiking, winter camping, and late spring use are probably the most important factors affecting the snowbank/wet meadow/streamside community system, including *Sibbaldia procumbens*. The threats to this habitat from winter camping are not well documented, but are believed by several experts to be from compaction and loss of snow load if snow caves are built on top of less than 1-2' of snow, and concentration of waste in snowbank community patches. Winter camping is a greater concern for snowbank communities that

are used for camping repeatedly in a winter. This threat is probably less for populations of this species in ravine habitats than any that might occur along more open streams.

There are some site-specific threats to *Sibbaldia procumbens* related to people skiing off a snowfield in Tuckerman Ravine late in the year. In June and July, material is loose and can easily move around, and this is the time of year when skiers use the gully where the population is located. April skiing does not seem to present a problem.

Changes to hydrology could pose a threat to this species, but the threat from trampling and recreational use is greater. Global warming and acid rain may be threats, but it is uncertain how much they impact alpine species, and they are less important than other threats.

Viability concern

The expert panel indicated that snowbank/wet ravine/streamside community species are very scattered; their distribution and association with others is unpredictable, making selection of focal or surrogate species for these communities inappropriate. WMNF contains 100% of the population in NH and the eastern U.S. Future outcome is expected to decline if the population is not protected from late season skiing and other recreational use, so species was kept on list to help ensure that the site is protected.

Management activities that might affect viability

The factor with potential to impact this species that the WMNF has some control over is trampling by skiers and other recreationists. Management that would limit late season skiing near this population, and help keep hikers on designated trails, would reduce the potential for trampling.

References

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Panel held: May 13-15, 2002, Rutland, Vermont.